

# PELLETHANE™ 2363-80AE

## Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

### Product Description

Feature: USP Class VI

### General

|                   |  |                             |                 |
|-------------------|--|-----------------------------|-----------------|
| Material Status   | • Commercial: Active                     |                             |                 |
| Availability      | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• North America | • South America |
| Agency Ratings    | • USP Class VI                           |                             |                 |
| Forms             | • Pellets                                |                             |                 |
| Processing Method | • Extrusion                              | • Injection Molding         |                 |

| Physical                                 | Nominal Value | Unit              | Test Method |
|--|---------------|-------------------|-------------|
| Specific Gravity                         | 1.12          | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (190°C/8.7 kg) | 10            | g/10 min          | ASTM D1238  |
| Molding Shrinkage                        |               |                   | ASTM D955   |
| Flow                                     | 0.50 to 0.60  | %                 |             |
| Across Flow                              | -0.10 to 0.40 | %                 |             |

| Mechanical   | Nominal Value | Unit | Test Method |
|--|---------------|------|-------------|
| Taber Abrasion Resistance<br>1000 Cycles, 1000 g, H-22 Wheel | 30.0          | mg   | ASTM D1044  |

| Elastomers                 | Nominal Value | Unit | Test Method |
|----------------------------|---------------|------|-------------|
| Tensile Stress             |               |      | ASTM D412   |
| 50% Strain                 | 4.83          | MPa  |             |
| 100% Strain                | 6.14          | MPa  |             |
| 300% Strain                | 10.3          | MPa  |             |
| Tensile Strength (Break)   | 29.0          | MPa  | ASTM D412   |
| Tensile Elongation (Break) | 650           | %    | ASTM D412   |
| Elongation Set After Break | 70            | %    | ASTM D412   |
| Tear Strength <sup>2</sup> | 73.6          | kN/m | ASTM D624   |
| Compression Set            |               |      | ASTM D395B  |
| 25°C, 22.0 hr              | 30            | %    |             |
| 70°C, 22.0 hr              | 80            | %    |             |

| Hardness                     | Nominal Value | Unit | Test Method |
|------------------------------|---------------|------|-------------|
| Durometer Hardness (Shore A) | 85            |      | ASTM D2240  |

| Thermal                            | Nominal Value | Unit     | Test Method             |
|------------------------------------|---------------|----------|-------------------------|
| Glass Transition Temperature (DSC) | -46.7         | °C       | DSC                     |
| Vicat Softening Temperature        | 81.7          | °C       | ASTM D1525 <sup>3</sup> |
| CLTE - Flow (-30 to 80°C)          | 0.00016       | cm/cm/°C | ASTM D696               |

### Additional Information

Elastomer tests conducted on 0.125 inch (3.2 mm) injection molded specimen, unannealed, unless noted.

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 82.2 to 93.3  | °C   |
| Processing (Melt) Temp | 188 to 204    | °C   |
| Mold Temperature       | 15.6 to 60.0  | °C   |

### Injection Notes

Air dew point: <-40°C

| Extrusion        | Nominal Value | Unit |
|------------------|---------------|------|
| Melt Temperature | 188 to 204    | °C   |

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Die C

<sup>3</sup> Rate B (120°C/h), Loading 1 (10 N)

